

- Buprestis splendens*, 1801, Voet, Cat. Col., vol. I, p. 96, pl. 51, fig. 20.  
*Buprestis sex-punctata*, 1817, Schönherr, Syn. Ins., Band. I, Pars. 3, p. 255, no. 216. South America.  
*Colobogaster sex-punctata*, 1838, Cast. & Gory, Mon. Bupr., vol. 2, Gen. Colobogaster, p. 9, pl. 2, fig. 7. Cayenne.  
*Chrysobothris sex-punctata*, 1887, Waterhouse, Biol. Centr. Amer., vol. 3, pt. 1, p. 35. South America, Nicaragua.  
*Chrysobothris sex-punctata*, 1903, Kerremans, Gen. Ins., Fasc. 12, p. 184. Brazil.

SOME HALICTINE BEES IN THE UNITED STATES NATIONAL MUSEUM (HYM.)

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The present paper completes my study of the entire collection of bees borrowed from the National Museum a few years ago. The collection proves to contain 205 new species and varieties but many of these, though in type, have not yet been published.

*Halictus bentoni* sp. n.

*Female*.—Length about 8–8.5 mm., anterior wing about 6.5 mm.; black, with the hind margins of the abdominal segments hyaline; pubescence dull white, forming broad entire bands at bases of second and following abdominal segments, but no bands on apical margins; clypeus rather produced, polished, with sparse distinct punctures; mandibles reddened apically; antennae dark, the flagellum very faintly brownish beneath; mesothorax densely and very distinctly punctured, shining between the punctures; area of metathorax hardly defined, appearing rugulose under a lens; posterior truncation with sharp but not prominent lateral margins, and no dentiform angles above; legs black, tarsi reddened at apex; tegulae rufotestaceous; wings hyaline; stigma (which is large) and nervures clear yellowish-ferruginous; abdomen moderately shining, but very finely and closely punctured all over. Microscopical characters: front very densely punctured; area of metathorax cancellate; hind spur with broad obtuse semicircular laminae.

Kotal Malul, Southern Persia, Feb. 1906 (*Frank Benton*), U. S. Nat. Museum. This may be compared with *H. albipes*, but it is more robust, with a longer head, and closely punctured first abdominal segment. Two specimens were obtained.

*Halictus persicus* sp. n.

*Female*.—Length about 5.5 mm., anterior wing nearly 5 mm.; black, with the hind margins of the abdominal segments testaceous; pubescence dull

white, scanty; no apical hair-bands on abdomen, but bases of second and following segments with white bands of tomentum, broad laterally, failing in middle; flagellum ferruginous beneath; clypeus not produced, shining and irregularly punctured; front closely punctured, but shining between the punctures; mesothorax polished, distinctly but not very densely punctured, the posterior half distinctly green; scutellum punctured, with two smooth polished spaces; area of metathorax large, rather distinctly defined, irregularly plicate; posterior truncation not sharply defined; tegulae clear testaceous; wings very clear, nervures and stigma pale amber; legs black, with the knees, tibiae at apex and tarsi ferruginous, the anterior basitarsi dark, and the hind basitarsi with a dark cloud apically; abdomen broad, shining, very finely punctured; extreme apex reddish. Microscopical characters: front densely punctured, but the spaces between the punctures polished; mesothorax polished, without any sculpture between the punctures; area of metathorax with strongly wrinkled rugae, hind spur with three strong spines. The green tint on the mesothorax may be hardly appreciable.

Kotal Malul, S. Persia, Feb. 1906, three (*F. Benton*). U. S. National Museum.

The following key separates the above species from those described by Pérez from the Persian Gulf:

- Metallic species with large head, related to *H. cephalicus* Morawitz;  
 length 6 mm. (Mascate).....*omanicus* Pérez  
 Head ordinary..... 1  
 1. Dark green, with bronzy tints on head and thorax; length 7 mm.  
 (Bahrein).....*arabs* Pérez  
 General color black, with little or no green..... 2  
 2. Larger, without green tints.....*bentoni* Ckll.  
 Smaller, with greenish tints on mesothorax.....*persicus* Ckll.

#### *Halictus capitosus* Smith

Tlahualilo, Durango, Mexico, at peach flowers, March 9, 1904  
 (*A. W. Morrill*).

#### *Halictus morrilli* sp. n.

*Female*.—Length about 8.5 mm., anterior wing 7.7 mm.; black, the abdomen with broad bands of white tomentum at bases of second and following segments. Very closely resembles *H. forbesii* Rob., to which it runs in Crawford's (1907) table, but the head is smaller, with the face narrower; the wings are not at all yellowish; the second submarginal cell is very broad, receiving the first recurrent nervure some distance before its end; the scutellum is shorter, with the disc highly polished; and the hind spur has numerous small broad rounded laminae, appearing nodulose or obtusely serrate. From *H. desertus* Smith it is known by the shining meso-

thorax, with a punctureless area on each side of middle posteriorly; the clypeus and supraclypeal area are also highly polished, with very few punctures. From *H. supercretus* Ckll. it differs by the shining thorax, white bands on abdomen, clearer wings and other characters. The tegulae are piceous; area of metathorax granular, not sharply bounded behind; posterior truncation with long, pale hair, not sharply margined; hair of head and thorax white; abdomen subglaucous, extremely finely punctured, hind margins of segments not pallid; stigma rather dull ferruginous.

Tlahualilo, Durango, Mexico, at peach blossoms March 9, 1904 (*A. W. Morrill*). U. S. Nat. Museum.

***Halictus respersiformis* sp. n.**

*Female*.—Length about 6 mm., anterior wing 5 mm.; robust, black, with black legs, antennae and tegulae, but hind margins of second and following abdominal segments broadly dark brown; pubescence dull white, the bases of second and third abdominal segments with large elongate patches of white tomentum on each side, the base of fourth with white hair right across, but thin in middle; head suboval, face narrow; front extremely densely and minutely punctured; mesothorax shining, but finely and closely punctured all over, on the disc posteriorly the punctures separated by more than the diameter of one; area of metathorax minutely reticulated, with delicate oblique plicae at sides, the posterior middle V-shaped, not crossed by a sharp keel; posterior truncation heart-shaped, sharply defined, with long hair not hiding the surface; tegulae reddish-black; wings strongly dusky, stigma and nervures dark brown, second submarginal cell rather broad, receiving first recurrent nervure well before end; hind spur with three long teeth, all far from base; abdomen shining, with thin pale hair, first segment very minutely punctured, principally at sides, toward the base very finely transversely lineolate.

Tlahualilo, Durango, Mexico, at peach blossoms, March 9, 1904 (*A. W. Morrill*) U. S. Nat. Museum. In Crawford's table (1907) this runs to *H. macoupinensis* Rob. and *H. divergens* Lovell, but it is larger and more robust than these, with dark tegulae. In the Mexican fauna it resembles *H. respersus* Vachal, but is distinguished by the reticulate area of metathorax and dusky wings.

***Halictus cordovens* sp. n.**

*Male*.—Length about 6 mm., anterior wing 4.7 mm.; black, the abdomen shining, reddish black; pubescence scanty, white, rather abundant on face, but not hiding surface; head round seen from in front, face broad, clypeus not produced; no pale face-marks; mandibles chestnut-red apically; antennae long, black; clypeus closely punctured; front granular under a lens, but the microscope shows rather coarse punctures, so dense as to give a cancellated effect; mesothorax coarsely and very densely punctured, a

little shining area posteriorly; scutellum polished, punctured round the sides, but scarcely at all along the middle; area of metathorax shining, with irregular coarse branching rugae; sides of metathorax coarsely cancellate; tegulae piceous, not punctured; wings dusky; stigma and nervures dark brown; second submarginal cell marrow, third long, its outer nervure (which is strong) with a double curve; legs very dark brown; abdomen without hair-bands or patches, the depressed hind margins of segments with scanty pale hair; apical plate very broadly rounded, with pallid margin; venter ferruginous, with a dusky cloud about the middle. The joints of the flagellum are hardly at all gibbous, and have a feebly sculptured surface, without any sharply pitted or honey-comb-like structure.

Cordova, Mexico, October (*L. O. Howard*) U. S. Nat. Museum. Nearest to *H. pectoralis* Smith, to the vicinity of which it runs in Crawford's (1907) table. It is larger, and has the mesothorax more coarsely and densely punctured. It also differs conspicuously by the long third submarginal cell. It has rather the aspect of a *Sphcodes*, owing to the coarse sculpture and shape of the head; but the antennae are those of *Halictus*, and the face is not densely covered with white hair.

#### *Halictus deceptor* Ellis.

Cacao, Trece Aguas, Alta Vera Paz, Guatemala, June 1907 (*G. P. Goll*).

#### *Rhopalictus patagonicus* sp.n.

*Female*.—Length nearly 7 mm., anterior wing 5.7 mm.; head, thorax, legs and antennae black, the flagellum very obscurely brownish beneath, the small joints of tarsi reddish; abdomen shining ferruginous, impunctate and without hair-bands, first segment marked with black on each side toward base, venter mainly black, with base and apex broadly red; pubescence very scanty, pale fuscous on outer side of hind tibiae; face broad, the eyes strongly emarginate, clypeus and supraclypeal area distinctly greenish, clypeus high, microscopically tessellated, very sparsely punctured; front minutely rugulose; mesothorax shining, without distinct punctures, the surface microscopically tessellated; area of metathorax long, shining, without plicae; posterior truncation shining, not sharply bounded; tegulae piceous; wings faintly dusky, stigma and nervures dark brown; second submarginal cell rather broad, receiving first recurrent nervure very near its end; third submarginal cell broad, broader on marginal than second; hind spur with numerous short, slender spines; ventral abdominal segments fringed with long erect hair.

Chubut, Patagonia, from W. F. H. Rosenberg; U. S. Nat. Museum. I had at first placed this as an aberrant *Halictus*, but it is clearly congeneric with *Rhopalictus corinogaster* (Spinola)

from Chile. The metathorax is much narrower dorsally, but has the same general appearance, and the shape of the third submarginal cell is the same. The strongly emarginate eyes exclude it from true *Halictus*. The next species, also a *Rhopalictus*, is still more like *Halictus*.

**Rhopalictus chloronotus** sp. n.

*Female*.—Length nearly 8 mm., anterior wing 6.5 mm.; robust formed as in *Halictus*, but the eyes distinctly emarginate, and the large broad area of metathorax, which is well bounded behind, without plicae; hair of head and thorax dull white, rather abundant; abdomen with triangular hair-patches at bases of segments 2 to 4 laterally; the apex, which is slightly reddened, especially beneath, densely hairy. Head broad, black, nowhere distinctly metallic; clypeus and supraclypeal area somewhat shining, but not polished, not distinctly punctured; antennae dark; front dull and appearing granular, the surface microscopically roughened; mesothorax dark green, dullish (microscopically tessellate) without evident punctures; scutellum more shining, faintly greenish, not punctured; other parts of thorax black; posterior truncation shining, the sharp margin only going half-way up each side; tegulae dark reddish; wings very faintly dusky, stigma and nervures reddish; second submarginal cell much higher than broad, receiving first recurrent nervure before its end; third submarginal cell broad, shaped as in *R. corinogaster*; legs very dark brown, with pale hair; abdomen broad, black, the first segment brownish, hind margins of second to fourth pallid brownish, venter with pale erect hair.

Chile (*E. C. Reed*). U. S. Nat. Museum. A pencilled label gives the exact locality which looks like "Chacogut." I cannot now be positive, but I believe this is the species with "mesothorax faintly greenish" (*Trans. Amer. Ent. Soc. XXXI*, p. 356) which I saw in the British Museum, labeled with a manuscript name by Spinola. It appears to be close to *Halictus chloromelas* Alfken but is larger, without the violet-blue tints on head and thorax.

**Halictus perzonatus** sp. n.

*Female*.—Length about 8 mm., anterior wing 6.2, robust, black, the abdomen dorsally dark greenish, the hind margins of the segments dark brown; eyes rather strongly but not abruptly emarginate; clypeus produced, convex, polished and shining, with sparse strong punctures; supraclypeal area also shining; front dull; flagellum obscurely reddish beneath; appearing granular under a lens, but the microscope shows dense minute but very distinct punctures, the surface between tessellate; scutellum very finely punctured, distinctly shining; area of metathorax with extremely dense and delicate plicae, connected by cross-lines, so that the surface is subreticulate, and seems finely roughened under a low-power lens; posterior